

least one modification resulting in the complete or partial inactivation of at least one gene encoding a protein involved in fermentative metabolism or promoting said metabolism, or at least one modification resulting in the underexpression of at least one gene encoding a protein involved in fermentative metabolism or promoting said metabolism or both.

21 (New). The lactic acid bacterium of claim 18, wherein said gene is selected from the group consisting of: genes encoding proteins of the heme biosynthesis pathway; genes encoding proteins of the cytochrome biosynthesis pathway; and, genes encoding proteins of the Krebs cycle.

22 (New). The lactic acid bacterium of claim 19, wherein said gene is selected from the group consisting of: genes regulating metabolic pathways promoting the respiratory pathway; genes encoding enzymes of the cytochrome biosynthesis pathway; and, genes encoding heme proteins.

23 (New). The lactic acid bacterium of claim 20, wherein said gene is selected from the group consisting of *ccpA* gene and the *gls24* gene.

24 (New). The lactic acid bacterium of claim 17, wherein said bacteria is selected from the group consisting of: *Lactococcus*, *Lactobacillus*, *Leuconostoc*, *Streptococcus*, *Propionibacterium*, *Bifidobacterium*, and *Enterococcus*.

25 (New). The lactic acid bacterium of claim 24, wherein said bacterium is a strain of the species *Lactococcus* or *Streptococcus* transformed with at least one gene encoding a protein of the heme biosynthesis pathway.

26 (New). A method of culturing bacteria, said method comprising culturing at least one strain of lactic acid bacterium of claim 24 under conditions inducing respiratory metabolism in said strain.

27 (New). The method of culturing of claim 26, wherein said culturing comprises production of a lactic acid bacterium starter culture and which further comprises harvesting the bacteria at the end of said culture.

28 (New). A lactic acid bacterium starter culture comprising at least one strain of lactic acid bacterium of claim 17.

29 (New). A method for preparing a fermented product, said method comprising inoculating a medium to be fermented using a lactic starter culture of claim 28.

30 (New). The method of claim 29 wherein the fermented product is recovered.

31 (New). The lactic acid bacterium starter culture of claim 28, wherein said bacterium further comprises a gene encoding a protein of interest.

32 (New). A method of producing the protein encoded by the gene of interest comprising culturing the lactic acid bacterium starter culture of claim 31 under conditions sufficient for the production of protein encoded by said gene of interest.